



MONTHLY NOTICES

OF THE

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DECEMBER 8, 1905.

No. 2

W. H. MAW, Esq., PRESIDENT, in the Chair.

Charles Frederick Aspinwall, B.A., Chestergate, Macclesfield ;
 Hubert Hayward Champion, Uppingham School, Rutland ;
 Lieut. Alfred Henry Laurence Ferris, R.N.R., Duncarrick,
 Castlerock, Co. Derry, Ireland ; and
 Edward MacFarlane, Under-Secretary for Lands and Chief
 Surveyor for New South Wales, Department of Lands,
 Sydney, Australia,

were balloted for and duly elected Fellows of the Society.

The following candidates were proposed for election as Fellows of the Society, the names of the proposers from personal knowledge being appended :—

Robert Courtenay, B.A. (Dublin), Indian Civil Service
 (retired), 34 Wilmount Street, Woolwich (proposed by
 A. M. W. Downing) ;
 Chetwode G. G. Crawley, A.B. (T.C.D.), Lieut. R.M. Artil-
 lery, R.N. Staff of Science Instructors, H.M.S. Vernon,
 Portsmouth (proposed by Isaac Molloy) ; and
 John Milne Gardiner Shaw, Mem. Inst. Naval Architects,
 F.R. Met. Soc., c/o John Swire and Sons, 8 Billiter
 Square, London, E.C. (proposed by E. T. Whittaker).

Sixty-one presents were announced as having been received since the last meeting ; including amongst others :—

Major C. F. Close, Text book of surveying, presented by the
 author ; W. G. Hooper, Æther and gravitation, presented by

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the author ; Observations of the total solar eclipse of 1900 and 1901, presented by the U.S. Naval Observatory.

Frank McClean, Photographs of the Spectrum of Nova *Persei*, presented by Mrs. McClean ; Photographs of the total eclipse of 1905 August 30 taken by the Hamburg Observatory Expedition, presented by Professor R. Schoer ; Further charts of the Astrographic Chart of the Heavens, presented by the Royal Observatory, Greenwich ; Series of transparencies from the negatives of the total solar eclipse of 1905 August, taken at Sfax, Tunis, presented by the Astronomer Royal ; Portrait of Sir W. Huggins (lithograph), drawn and presented by Mr. Washington Green.

Note on the Astronomical Value of Ancient Statements of Solar Eclipses. By Simon Newcomb.

In Mr. Cowell's interesting paper on "Ancient Solar Eclipses," in the October number of the *Monthly Notices*, he mentions my views as to the value of ancient records of these eclipses, but fails to state them with entire exactness. I therefore venture to present a brief statement of them.

1. In order that an ancient total eclipse may be utilised for astronomical purposes, the record must inspire a fair confidence that the eclipse was actually total at a well-defined or determinable place of observation.

2. There is only one ancient total eclipse which seems to satisfy this condition, and this is one in which the record of its interpretation is certainly in error. I refer to the eclipse seen by the army of Xerxes, near Sardis, about B.C. 478.

3. Next in order of confidence comes the eclipse of Agathocles, which there is reason to believe was total somewhere in the Hellespont ; but this is vague.

4. In no other case is the fact of the eclipse being total at a definite place distinctly stated. It has been tacitly assumed that when an eclipse is mentioned in the annals of an empire, or by a poet or historian, it was total at the capital where the record was made, or at the place where the poet or historian lived.

5. Confronted with the dilemma :—

Either an historian, poet, or chronicler recorded an eclipse in which the limit of totality was an unknown number of miles distant from the point of record ; or

The laws of motion of the Moon were different in former ages from what they are now. I choose the first horn of the dilemma.

6. The researches of Brown show that during the past two centuries the motions of the node and perigee of the Moon have coincided with the results of gravitational theory within a limit